

isc Silicon NPN Power Transistor

BUT46A

DESCRIPTION

- High Voltage
- High Speed Switching

APPLICATIONS

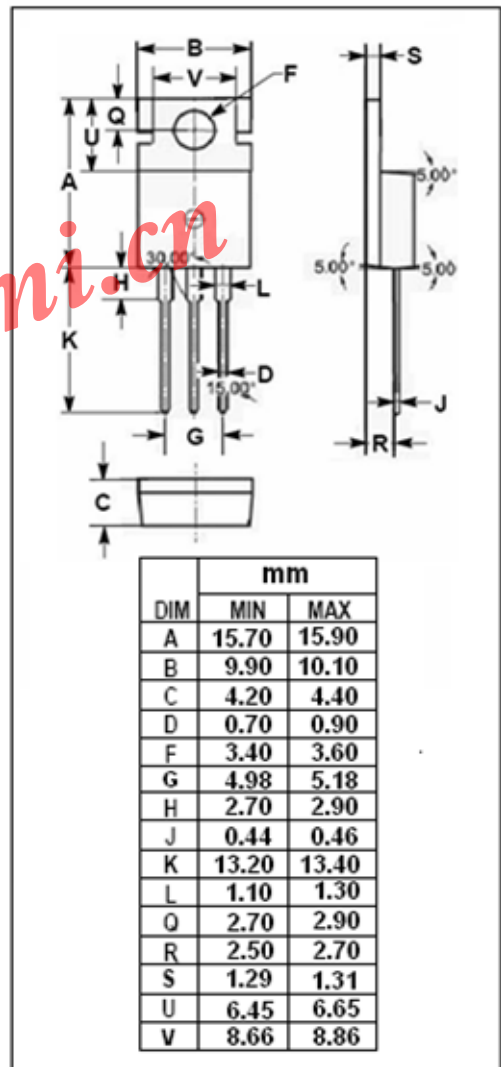
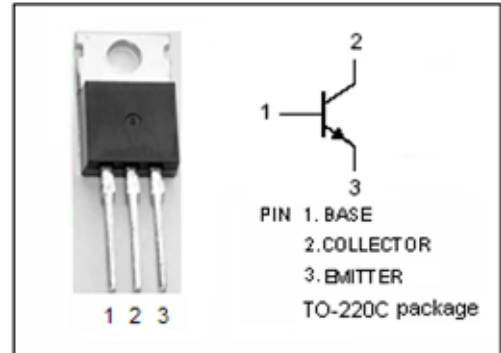
- General purpose switching
- Switch mode power supply
- Electronic ballasts for fluorescent lighting

ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CES</sub>	Collector-Emitter Voltage	1000	V
V <sub>CEO</sub>	Collector-Emitter Voltage	450	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current-Continuous	5	A
I <sub>B</sub>	Base Current-Peak	3	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	100	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	1.76	°C/W



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.1\text{A}; I_B=0$	450			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.4\text{A}$			1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.6\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.4\text{A}$			1.3	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=1000\text{V}; I_E=0$ $V_{CB}=1000\text{V}; I_E=0; T_C=125^{\circ}\text{C}$			0.1 1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$			1.0	mA
$h_{FE}$	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=5\text{V}$	10		35	

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